

CLAIMS

1. An autonomous garment with active thermal control and powered by solar cells, comprising:

 solar cells (1);
 batteries (2);
 resistors (3);
 refrigeration cycle (4);
 Peltier cells (5);
 microcontroller (6);
 pipes (7), electric bus connector, thermal sensors, and plugs.

2. The system of claim 1, wherein solar cells, connected to an electric bus connector, are on the outer shell of the garment and include optical parts, protection layer, and filters with appropriate geometry optimized for solar spectrum or other.

3. The system of claim 1, wherein batteries, embedded in the garment, are connected to the electric bus connector.

4. The system of claim 1, wherein a set of resistors, embedded in the garment and connected to the

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electric bus connector, is properly distributed in the garment for delivery of heat.

5. The system of claim 1, wherein Peltier cells, embedded in the garment and connected to the electric bus connector, are properly distributed in the garment to produce heat and cold.

6. The system of claim 1, wherein the refrigerating cycle, connected to the electric bus connector, include pipes properly distributed in the garment for delivery of cooling.

7. The system of claim 1, characterized by including at least one mechanism among thermal sensors, luminous and sonorous signaling appliances, positioning systems, and power plugs, connected to the electric bus connector.

8. The system of claim 1, characterized by including a microcontroller connected to all the electric devices, via the electric bus connector, for the active thermal control of the garment.

9. The system of claims 1 and 8, wherein the microcontroller includes means to display data and software to control the thermal parameters.

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10. The apparatus of an autonomous garment with active thermal control and solar cells adapted to convert fire radiation in electric power according to claim 1, specially developed for uniform applications, e.g. for fireman.

11. A method to produce an autonomous garment with active thermal control and powered by solar cells according to claim 1.